IN THE CLAIMS:

The content and status of each claims follows.

1. (previously presented) A method for treating a patient with chronic pain, comprising:

identifying a patient experiencing sensations of chronic peripheral pain, wherein the chronic peripheral pain includes at least one of chronic neuropathic pain, failed back surgery syndrome, arachnoiditis, occipital neuralgia, peripherial pelvic pain, cardiac pain and back pain;

providing at least one leadless stimulator having at least two electrodes;

implanting the at least one leadless stimulator adjacent to at least one peripheral nerve of the patient, said peripheral nerve being responsible at least in part for the sensations of chronic pain experienced by the patient;

providing operating power to the at least one leadless stimulator;

using at least one external appliance to transmit stimulation parameters to the at least one leadless stimulator;

receiving and storing the stimulation parameters within the at least one leadless stimulator;

generating stimulation pulses within the at least one leadless stimulator in accordance with the stimulation parameters; and

delivering the stimulation pulses from the electrodes of the at least one leadless stimulator to the at least one peripheral nerve of the patient for the purpose of reducing the sensations of chronic peripheral pain experienced by the patient;

wherein the leadless stimulator has a size and shape suitable for placement of the electrodes adjacent to the at least one peripheral nerve.

2. (original) The method of Claim 1 wherein the stimulation pulses are delivered at less than about 1-10 mA.

3. (original) The method of Claim 2 wherein the stimulation pulses are delivered at less than about 100 to 150 Hz.

4. (original) The method of Claim 1 wherein the at least one peripheral nerve comprises at least one of an ulnar nerve, an ulnar nerve branch, a musculocutaneous nerve, a musculocutaneous nerve branch, a median nerve, a median nerve branch, a radial nerve, a radial nerve branch, a medial cutaneous nerve, an intercostobrachial nerve, a common peroneal nerve, a common peroneal nerve branch, a posterior cutaneous nerve, a posterior cutaneous nerve branch, a sciatic nerve, a sciatic nerve branch, a sural nerve, a sural nerve branch, a saphenous nerve, a saphenous nerve branch, an obturator nerve, an obturator nerve branch, a femoral nerve, a femoral nerve branch, a lateral cutaneous nerve, a lateral cutaneous nerve branch, an intercostal nerve, an intercostal nerve branch, a greater occipital nerve, a lesser occipital nerve, and a third occipital nerve.

5. (original) The method of Claim 4 wherein the stimulation pulses are delivered at less than about 1-10 mA.

6. (original) The method of Claim 5 wherein the stimulation pulses are delivered at less than about 100 to 150 Hz.

7. (previously presented) The method of Claim 1 wherein the chronic pain is located in one or both upper limbs, and the at least one leadless stimulator is implanted adjacent to at least one nerve fiber of an ulnar nerve, an ulnar nerve branch, a musculocutaneous nerve, a musculocutaneous nerve branch, a median nerve, a median nerve branch, a radial nerve, a radial nerve branch, a medial cutaneous nerve, and an intercostobrachial nerve.

8. (original) The method of Claim 1 wherein the chronic pain is located in one or both lower limbs, and the at least one stimulator is implanted adjacent to at least one nerve fiber of a common peroneal nerve, a common peroneal nerve branch, a sciatic nerve, a sciatic nerve branch, a saphenous nerve, a saphenous nerve branch, a posterior cutaneous nerve, a posterior cutaneous nerve branch, a sural nerve, a sural nerve branch, an obturator nerve, an obturator nerve branch, a femoral nerve, a femoral nerve branch, a lateral cutaneous nerve, and a lateral cutaneous nerve branch.

9. (original) The method of Claim 1 further comprising

providing at least one sensor;

using the at least one sensor to sense a physical condition; and

determining the stimulation parameters based upon the sensed condition.

10. (previously presented) The method of Claim 9 wherein the at least one sensor is a part of the leadless stimulator.

11. (previously presented) The method of Claim 1 further comprising providing and implanting more than one leadless stimulator.

12-14. (cancelled)

15. (previously presented) A method for treating a patient with chronic pain, comprising:

identifying a patient experiencing sensations of chronic peripheral pain, wherein the chronic peripheral pain includes at least one of chronic neuropathic pain, failed back surgery syndrome, arachnoiditis, occipital neuralgia, peripherial pelvic pain, cardiac pain and back pain;

providing at least one leadless stimulator having at least two electrodes;

providing at least one sensor;

implanting the at least one stimulator adjacent to at least one peripheral nerve of the patient, said peripheral nerve being responsible at least in part for the sensation of chronic peripheral pain experienced by the patient;

providing operating power to the at least one stimulator;

using the sensor to sense a physical condition;

determining stimulation parameters based upon the sensed condition;

generating stimulation pulses within the at least one stimulator in accordance with the stimulation parameters; and

delivering the stimulation pulses from the electrodes of the at least one stimulator to the at least one peripheral nerve of the patient for the purpose of reducing the sensations of chronic peripheral pain experienced by the patient;

wherein the stimulator has a size and shape suitable for placement of the electrodes adjacent to the at least one peripheral nerve of the patient.

16. (original) The method of Claim 15 wherein the at least one sensor is a part of the stimulator.

17. (original) The method of Claim 15 wherein the stimulation parameters are determined using at least one external appliance.

18. (original) The method of Claim 15 wherein providing power to the at least one stimulator comprises receiving power from at least one external appliance.

19. (original) The method of Claim 18 wherein providing power to the at least one stimulator further comprises storing the power received from the at least one external appliance.

20. (original) The method of Claim 15 further comprising providing and implanting more than one stimulator.

21. (original) The method of Claim 15 wherein the sensor senses at least one of electrical activity of a nerve, electrical activity of the brain, muscle activity, and patient mobility.

22. (original) The method of Claim 15 wherein the sensor senses at least one of sympathetic discharge, medication level, neurotransmitter level, hormone level, cytokine level, neuropeptide level, endorphin level, enzyme level, level of a bloodborne substance, level of a substance in the cerebrospinal fluid, and level of a substance in the local interstitial fluid.

23-26. (cancelled)